## (19) World Intellectual Property Organization

International Bureau





(43) International Publication Date 28 July 2005 (28.07.2005)

**PCT** 

## (10) International Publication Number WO 2005/068371 A1

(51) International Patent Classification<sup>7</sup>: B01D 61/08

C02F 1/44,

(21) International Application Number:

PCT/AU2005/000052

(22) International Filing Date: 17 January 2005 (17.01.2005)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

2004900164

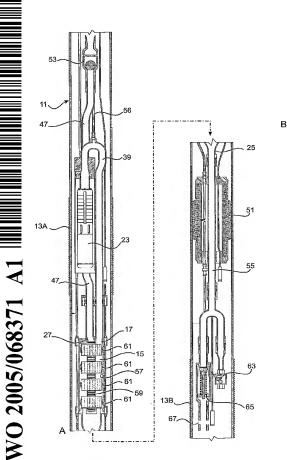
15 January 2004 (15.01.2004) AU

(71) Applicant (for all designated States except US): CRISALIS INTERNATIONAL PTY LTD [AU/AU]; 17 Allpike Road, Darlington, Western Australia 6055 (AU).

- (72) Inventor; and
- (75) Inventor/Applicant (for US only): BARBER, Christopher [AU/AU]; 17 Allpike Road, Darlington, Western Australia 6055 (AU).
- (74) Agent: WRAY & ASSOCIATES; Level 4, The Quadrant, 1 William Street, Perth, Western Australia 6000 (AU).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

[Continued on next page]

(54) Title: WATER DESALINATION



(57) Abstract: An in situ desalination apparatus comprising a reverse osmosis unit (15) having a reverse osmosis medium, the reverse osmosis unit in use to be located within a body of water under ambient biophysico-chemical conditions often different from those at the surface, the unit having an inlet (17) opening to one side of the reverse osmosis medium, in use the inlet to be located below the upper surface of a body of water, the unit having a concentrate outlet (25) opening to the one side of the reverse osmosis medium and opening into the exterior of the unit at a position spaced below the inlet to return concentrate into the water body, the unit having a permeate outlet (27) opening to the other side of the reverse osmosis medium, the permeate outlet communicating with a delivery line extending from the body of water, a pump (23) between body of water and the reverse osmosis unit and adapted to pressurise the water located at the one side of the reverse osmosis medium.

## WO 2005/068371 A1



(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

## **Published:**

with international search report